



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,829	06/19/2001	Karel Van den Berg	8553/221	2485

7590 06/19/2003

Penrose Lucas Albright, Esq.
MASON, MASON & ALBRIGHT
P.O. Box 2246
Arlington, VA 22202-0246

EXAMINER

FERGUSON, MICHAEL P

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/884,829

Applicant(s)

VAN DEN BERG, KAREL

Examiner

Michael P. Ferguson

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-79 and 81-84 is/are pending in the application.
- 4a) Of the above claim(s) 58-61, 64, 65, 67, 72, 75, 76 and 79 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 55-57, 62-66, 68-71, 73, 74, 77, 78 and 81-84 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 58-61, 64, 65, 67, 72, 75, 76 and 79 are directed to an invention that is independent or distinct from the invention originally elected for the following reasons:

Claims 58-61, 64, 65, 67, 72, 75, 76 and 79 are directed to species II shown in Figures 4-7.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 58-61, 64, 65, 67, 72, 75, 76 and 79 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

2. Claims 65 and 82-84 are objected to because of the following informalities:

Claim 65 (line 2) recites "measure means". It should recite --measuring means--.

Claim 82 (line 2) recites "the plurality of vehicles". It should recite --a plurality of vehicles--.

Claim 82 (line 7) recites "upon which said a wire... which tightenes". It should recite --upon which said wire... which tightens--.

Claim 82 (line 12) recites "predetermine pattern". It should recite --predetermined pattern--.

Claim 83 (line 1) recites "grounding engaging". It should recite --ground engaging--.

Claim 84 (line 1) recites "wherein in said power source". It should recite --wherein said power source--.

Claim 84 (line 2) recites "for each said vehicles". It should recite --for each said vehicle--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 55-57, 62-66, 68-71, 73, 74, 77, 78 and 81-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte (DE 42 15 714) in view of Ruffner (USPN 6,338,013).

As to claim 55, Schulte discloses an apparatus for demarcating an area which has a demarcation element which has a section 6, and a vehicle 4 connected to an end of the section, the vehicle having a time switch system 38 (the timer 38 selectively positioning the end of the section 6 at pre-programmed locations at pre-programmed times and intervals) for selectively positioning the end of the section of the demarcation element (Figure 1, abstract).

Schulte fails to disclose an apparatus having a vehicle having a geodetic positioning system for selectively positioning the end of a section of a demarcation element.

Ruffner teaches an apparatus for mowing an area which has a mowing element **45** and a vehicle **1** connected to the mowing element, the vehicle having a geodetic positioning system for selectively positioning the mowing element; a GPS system providing for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage (Figure 1, column 1 lines 50-62, column 8 lines 38-65, column 31 lines 13-25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a vehicle having a geodetic positioning system for selectively positioning the vehicle as taught by Ruffner to provide for more precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage.

As to claim 56, Schulte discloses an apparatus wherein a demarcation element **6** is flexible so that it can be wound and rewound (Figure 1).

As to claim 57, Schulte discloses an apparatus wherein a demarcation element **6** has tightening means **42** for tightening the demarcation element (Figure 1).

As to claim 62, Schulte discloses an apparatus wherein a section 6 is adjustable in length, the apparatus having winding means 42 for winding and unwinding the adjustable section (Figure 1).

As to claim 63, Schulte discloses an apparatus wherein a winding means 42 is fitted to a vehicle 4 (Figure 1).

As to claim 64, Schulte discloses an apparatus which has a reference point which is connected to another end of a section 6, a winding means 42 being disposed at the reference point (Figures 1 and 3, abstract).

As to claim 65, Schulte discloses an apparatus which has a section length measuring means for determining the length of a section 6 between a reference point and a vehicle (abstract).

As to claim 66, Schulte discloses an apparatus which has angle measuring means associated with a demarcation element for determining the angle between a predetermined direction and a section 6 (abstract).

As to claim 68, Schulte fails to disclose an apparatus wherein a vehicle is provided with solar panels for its energy supply.

Ruffner teaches an apparatus wherein a vehicle 1 is provided with solar panels 16,62 for its energy supply; solar panels mounted on the vehicle supplying energy for recharging the vehicle's battery(Figure 1, column 6 lines 45-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a vehicle

provided with solar panels as taught by Ruffner to supplying energy for recharging of the vehicle's battery.

As to claim 69, Schulte discloses an apparatus wherein a vehicle **4** is an unmanned vehicle (Figure 1, abstract).

As to claim 70, Schulte discloses an apparatus wherein a vehicle **4** has ground engaging rotatable members **9,10** that support the vehicle, the ground engaging rotatable members consisting of essentially two members (Figure 1).

As to claim 71, Schulte discloses an apparatus wherein ground engaging rotatable members **9,10** are connected to drive means **17,18** so that they are independently drivable relative to each other (Figure 1).

As to claim 73, Schulte discloses an apparatus wherein a demarcation element **6** is flexible, tightening means **42** being provided for the demarcation element, the tightening means comprising a motor **17,18** (Figure 1).

As to claim 74, Schulte discloses an apparatus which has a further vehicle **5** and distance determining means for determining the distance between a first mentioned vehicle **4** and the further vehicle **5** (Figures 3 and 4).

As to claim 77, Schulte discloses an apparatus wherein a demarcation element **6** has a double conductor **30,32** (Figure 1).

As to claim 78, Schulte fails to discloses an apparatus which has a computer for remotely controlling the vehicle.

Ruffner teaches an apparatus which has a computer for remotely controlling the vehicle; the computer receiving position information from a GPS system and using it to

Art Unit: 3679

direct movement of a vehicle **1** via motors (Figure 1, column 15 line 60- column 16 line 12, column 16 lines 50-59).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a computer as taught by Ruffner to receiving position information from a GPS system and using it to direct movement of a vehicle via motors.

As to claim 81, Schulte discloses an apparatus for demarcating an area which comprises a demarcation element **6** that includes a plurality of flexible sections, a plurality of vehicles **4,5**, each of the vehicles being connected to an end of one of the sections, one of the vehicles including a time switch system **38** (the timer **38** selectively positioning the end of the section **6** at pre-programmed locations at pre-programmed times and intervals) for selectively positioning the vehicles, and all of the vehicles including tightening means **42** adjustably positioning an end of one of the sections and tightening a section which extends between the vehicles, the vehicles each being supported by two wheels **9,10** which are independently controllable by motors **17,18** carried on the vehicles (Figure 1, 3 and 4; abstract).

Schulte fails to disclose an apparatus having a vehicle including a geodetic positioning system for selectively positioning the vehicles, and the apparatus further comprising solar panels which are operatively connected to motors for providing energy to the motors.

Ruffner teaches an apparatus for mowing an area which comprises a mowing element **45** having a vehicle **1** including a geodetic positioning system for selectively

positioning the vehicles; a GPS system providing for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage (Figure 1, column 1 lines 50-62, column 8 lines 38-65, column 31 lines 13-25); and the apparatus further comprising solar panels **16,62** which are operatively connected to motors for providing energy to the motors; solar panels mounted on the vehicle supplying energy for recharging the vehicle's battery (column 6 lines 45-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a vehicle including a geodetic positioning system for selectively positioning the vehicle as taught by Ruffner to provide for more precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; and to have a vehicle provided with solar panels as taught by Ruffner to supplying energy for recharging of the vehicle's battery.

As to claim 82, Schulte discloses a system for demarcating an area within a field to limit the freedom of movement of animals which comprises: a plurality of vehicles **4,5**; each of the vehicles connected to an electrified wire **6** which, in part, defines the area; each or the vehicles having motive means for moving the vehicle and a power source **17,18** for energizing the motive means, each of the vehicles having two ground engaging members **9,10** for moving and steering it which are rotated by the motive

means; one of the vehicles having a reel **42** upon which the wire can be wound and unwound and which tightens the wire; and each of the vehicles having location determining means via a time switch positioning system **38** (the timer **38** selectively positioning the end of the section **6** at pre-programmed locations at pre-programmed times and intervals) which determines the position of each of the vehicles relative to the vehicles starting location, the time switch being programmed so that the vehicles move to predetermined locations at predetermined points of time according to a predetermined pattern (Figures 1,3 and 4; abstract).

Schulte fails to disclose a system having a computer that controls each of the vehicles; and each of the vehicles having location determining means via a geodetic positioning system which cooperates with the computer for determining the position of each of the vehicles relative to the field, the computer being programmed so that the vehicles are controlled by the computer and move to predetermined locations at predetermined points of time according to a predetermined pattern.

Ruffner teaches a system for mowing an area within a field which comprises: a vehicle **1**; the vehicles having motive means for moving the vehicle and a power source for energizing the motive means, the vehicle having two ground engaging members **19** for moving and steering it which are rotated by the motive means; a computer that controls the vehicle; and each of the vehicles having location determining means via a geodetic positioning system which cooperates with the computer for determining the position of each of the vehicles relative to the field; a GPS system providing for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system

Art Unit: 3679

providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage (Figure 1, column 1 lines 50-62, column 8 lines 38-65, column 31 lines 13-25); the computer being programmed so that the vehicles are controlled by the computer and move to predetermined locations at predetermined points of time according to a predetermined pattern; the computer receiving position information from a GPS system and using it to direct movement of a vehicle 1 via motors (column 15 line 60- column 16 line 12, column 16 lines 50-59).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Schulte to have vehicles having location determining means via a geodetic positioning system which cooperates with a computer for determining the position of each of the vehicles relative to the field, the computer being programmed so that the vehicles are controlled by the computer as taught by Ruffner to provide for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; the computer receiving position information from a GPS system and using it to direct movement of a vehicle via motors.

As to claim 83, Schulte discloses a system wherein ground engaging members 9,10 comprise wheels 12,14 which rotate about a respective axis of rotation (Figure 1).

Schulte fails to disclose a system wherein the center of gravity of each of the vehicles is below its respective axis of rotation.

Ruffner teaches a system wherein ground engaging members **19** comprise wheels which rotate about a respective axis of rotation, the center of gravity of each of a vehicle **1** being below its respective axis of rotation; the low center of gravity and large wheels enabling for easier maneuverability and preventing the vehicle from easily tipping over (Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Schulte to have vehicles having a center of gravity below a respective axis of rotation as taught by Ruffner to provide for easier maneuverability and preventing the vehicles from easily tipping over.

As to claim 84, Schulte discloses a system wherein a power source comprises for each vehicle a battery.

Schulte fails to disclose a system wherein a power source comprises for each vehicle a solar panel for charging the battery carried by each vehicle.

Ruffner teaches a system wherein a power source for a vehicle **1** comprises a battery and a solar panel **16,62** for charging the battery carried by each vehicle (Figure 1, column 6 lines 45-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an system as disclosed by Schulte to have a power source having for each vehicle a solar panel as taught by Ruffner for supplying energy for recharging of the vehicle's battery.

Response to Arguments

5. Applicant's arguments with respect to claims 55-57, 62-66, 68-71, 73, 74, 77, 78 and 81-84 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. The following patents are cited to be added to the applicant's list for they further show the state of the art with respect to demarcating systems:

Conroy (USPN 5,568,900) is cited for pertaining to a system capable of being attached to a vehicle having a geodetic positioning system.

van den Berg (USPN 6,439,162) is cited for pertaining to a system having a vehicle capable of using a geodetic positioning system.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (703)308-8591. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (703)308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9326 for regular communications and (703)872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1114.

MPF
June 12, 2003



Lynne H. Browne
Supervisory Patent Examiner
Group Art Unit 3679